

**CONTENTS**

**VOLUME 22, Nos 1-18**

*Issue No. 1, 10 January 1999*

Analyticity of the Semigroup Generated by the Operator of a Viscous Compressible Fluid: A. Kozhevnikov.....	1
Non-local Approach in Mathematical Problems of Fluid-Structure Interaction: L. Jentsch and D. Natroshvili .....	13
Global Boundedness of Solutions to a Reaction-Diffusion System: S. Zheng .....	43
The Scattering of Plane Elastic Waves by a One-dimensional Periodic Surface: T. Arens.....	55
The Resistive Coated Sphere in the Presence of a Point Generated Wave Field: Y. Arnaoudov, G. Dassios and M. Hadjinicolaou .....	73
Existence and Approximation of Solutions of Non-linear Discrete Systems on Infinite Intervals: R. P. Agarwal and D. O'Regan .....	91

*Issue No. 2, 25 January 1999*

Explicit Decay Bounds in Some Quasilinear One-dimensional Parabolic Problems: G. A. Philippin and S. Vernier-Piro.....	101
Singularity Analysis in 2+1-Dimensional Generalization of the Perturbation Equations of the KdV Hierarchy: J. Yu and Z.-K. Xie .....	111
Finite-dimensional Asymptotic Behavior in a Thermosyphon Including the Soret Effect: A. Jiménez-Casas and A. Rodríguez-Bernal.....	117
Spectra of Schrödinger Operators on Planar Domains with Ends with Unbounded Cross-section: J. Edward .....	139
A Convolution Formula for Time-invariant Linear Communication Systems: W. Krabs .....	171
The Nyström Method for Solving a Class of Singular Integral Equations and Applications in 3D-Plate Elasticity: A. Kirsch and S. Ritter .....	177

*Issue No. 3, February 1999*

Erratum .....	199
The Helmholtz Equation in a Quadrant with Robin's Conditions: F. Penzel and F. S. Teixeira .....	201
Edge Asymptotics for the Radiosity Equation over Polyhedral Boundaries: A. Rathsfeld .....	217
Maxwell and Lamé Eigenvalues on Polyhedra: M. Costabel and M. Dauge .....	243
Solvability of Non-linear Parabolic Boundary Value Problem with Equivalued Surface: X. Zhang .....	259
A Quasistatic Contact Problem with Slip-dependent Coefficient of Friction: A. Amassad, M. Shillor and M. Sofonea .....	267

*Issue No. 4, 10 March 1999*

Existence and Uniqueness Theorem for the Chan-Bodner-Lindholm Model: P. Gwiazda .....	285
On a Generalization of Blaschke's Rolling Theorem and the Smoothing of Surfaces: G. Walther .....	301
Variational Methods for Fluids of Prandtl-Eyring Type and Plastic Materials with Logarithmic Hardening: M. Fuchs and G. Seregin .....	317
Monogenic Functions and Representations of Nilpotent Lie Groups in Quantum Mechanics: J. Cnops and V. V. Kisil .....	353

*Issue No. 5, 25 March 1999*

Quasilinear Degenerate Parabolic Equations of Kirchhoff Type: M. Gobbino .....	375
A Numerical Method for the Computation of Electromagnetic Modes in Optical Fibres: P. Joly and C. Poirier .....	389
Existence of Classical Solutions for Compressible Viscoelastic Fluids of Oldroyd Type past an Obstacle: Š. Matušů-Nečasová, A. Sequeira and J. Videman .....	449

*Issue No. 6, April 1999*

Wiener-Hopf Factorization of a Generalized Daniele-Khrapkov Class $2 \times 2$ Matrix Symbols: M. C. Camara and A. F. dos Santos .....	461
Characterization of the Singular Part of the Solution of Maxwell's Equations in a Polyhedral Domain: F. Assous, P. Ciarlet, P. A. Raviart and E. Sonnendrücker .....	485
Numerical Solution of Non-stationary Aero-autoelasticity Integro-differential Operator Equations: G. N. Elnagar and A. Khamayseh .....	501
Periodic Solutions of Non-linear Kinematic Hardening Models: M. Kunze .....	515
Vorticity-Velocity Formulations of the Stokes Problem in 3D: A. Ern, J.-L. Guermond and L. Quartapelle .....	531

*Issue No. 7, 10 May 1999*

On Monotone Plastic Constitutive Equations with Polynomial Growth Condition: K. Chelmiński .....	547
The Stationary Stefan Problem with Convection Governed by a Non-linear Darcy's Law: M. Boukrouche and G. Łukaszewicz .....	563
Boundary Element Solution of a Scattering Problem Involving a Generalized Impedance Boundary Condition: L. Vernhet .....	587
A One-dimensional Flow Problem in Porous Media with Hydrophile Grains: A. Fasano .....	605
The Well-posedness of the Electric Field Integral Equation for Transient Scattering from a Perfectly Conducting Body: B. P. Rynne .....	619

*Issue No. 8, 25 May 1999*

Uniqueness Results, Control and Asymptotic Analysis for Slightly Compressible Fluids: C. Fabre .....	633
Stationary Problem of Second Grade Fluids in Three Dimensions: Existence, Uniqueness and Regularity: J. M. Bernard .....	655
Spectral Analysis of a Perturbed Multistratified Isotropic Elastic Strip: New Method: T. Bouhennache .....	689

*Issue No. 9, June 1999*

Analysis of a Two-stage Least Squares Finite Element Method for the Planar Elasticity Problem: S.-Y. Yang and C. L. Chang .....	713
Periodic and Solitary Travelling Wave Solutions for the Generalized Kadomtsev-Petviashvili Equations: A. A. Pankov and K. Pflüger .....	733
Uniqueness in the Inverse Transmission Scattering Problem for Periodic Media: B. Strycharz .....	753
Bound on the Counting Function for the Eigenvalues of an Infinite Multistratified Acoustic Strip: O. Poisson .....	773

*Issue No. 10, 10 July 1999*

Some Overdetermined Parabolic Problems: G. A. Philippin and A. Safoui .....	791
The Problem on Interaction of von Karman Plate with Subsonic Flow of Gas: A. Boutet de Monvel and I. Chueshev .....	801
Asymptotic Analysis of a Thin-layer Device with Tresca's Contact Law in Elasticity: G. Bayada, M. Chambat and K. Lhalouani .....	811
Resonance Phenomena for Water Waves in Channels of Arbitrary Cross-section: M. D. Groves and P. Lesky .....	837

*Issue No. 11, 25 July 1999*

Sub-Riemannian Geometry and Clinical Magnetic Resonance Tomography: W. Schempp .....	867
Implicit Residual Error Estimators for the Coupling of Finite Elements and Boundary Elements: U. Brink and E. P. Stephan .....	923
On the Application of Floquet's Theory to $L_p$ - $L_q$ Estimates for Hyperbolic Equations with Very Fast Oscillations: M. Reissig and K. Yagdjian .....	937

*Issue No. 12, August 1999*

On Uniqueness in the Inverse Conductivity Problem: A. Sever .....	953
Mathematical and Numerical Modellization of Large-scale Oceanic Waves: A. Belmiloudi, F. Brossier and L. Monier .....	967
An Inverse Contact Problem in the Theory of Elasticity: M. Yamamoto, D. Xu and J. Cheng .....	1001
Partial Fourier Approximation of the Lamé Equations in Axisymmetric Domains: B. Nkemzi and B. Heinrich .....	1017
Regularity of the Solutions of the Steady-state Boussinesq Equations with Thermocapillarity Effects on the Surface of the Liquid: L. Paquet .....	1043

*Issue No. 13, 10 September 1999*

Optimal Control of Boundary Habitat Hostility for Interacting Species: S. Lenhart, M. Liang and V. Protopopescu .....	1061
Sufficient Conditions for the Regularity of the Solutions of the Navier- Stokes Equations: L. C. Berselli .....	1079
Blow-up for a Class of Semilinear Integro-differential Equations of Para- bolic Type: D. Hirata .....	1087
Existence for a Time-dependent Heat Equation with Non-local Radiaton Terms: M. Metzger .....	1101
Resonant Frequencies for a Narrow Strip Grating: H. Ammari, N. Béréux and J. Nédélec .....	1121
Polynomial Motion of Nonholonomic Mechanical Systems of Chained Form: W. L. Xu and B. L. Ma .....	1153

*Issue No. 14, 25 September 1999*

Electromagnetic Scattering by a Homogeneous Chiral Obstacle: Scattering Relations and the Far-field Operator: C. Athanasiadis, P. A. Martin and I. G. Stratis .....	1175
Asymptotic Stability for a Non-local Problem in Electromagnetism: C. A. Bosello .....	1189

Two Arbitrarily Located Normal Forces and a Penny-shaped Crack: A Complete Solution: V. I. Fabrikant .....	1201
The Solvability of a Coupled Thermoviscoelastic Contact Problem with Small Coulomb Friction and Linearized Growth of Frictional Heat: C. Eck and J. Jarušek .....	1221
Weak Solution to a Phase-field Transmission Problem in a Concentrated Capacity: G. Schimperna .....	1235
Regularity of Weak Solutions of Maxwell's Equations with Mixed Boundary-conditions: F. Jochmann .....	1255

*Issue No. 15, October 1999*

Existence of Global Weak Solutions for a Class of Quasilinear Equations Describing Joule's Heating: M. Bién .....	1275
Computations on Thin Non-inhibited Hyperbolic Elastic Shells. Benchmarks for Membrane Locking: D. Choi .....	1293
A Model of Thermal Dissipation for a One-dimensional Viscous Reactive and Radiative Gas: B. Ducomet .....	1323
Diagnosis in Track and Field Performances past the 1988 Ben Johnson Doping Scandal: P. M. Fuchs .....	1351

*Issue No. 16, 10 November 1999*

Asymptotic Stability in Thermoelectromagnetism with Memory: B. Lazzari and R. Nibbi .....	1375
Analysis of Singular Perturbations on the Brinkman Problem for Fictitious Domain Models of Viscous Flows: P. Angot .....	1395
Interface Cracks in Anisotropic Composites: R. Duduchava, A.-M. Sändig and W. L. Wendland .....	1413
Automatic Control of the Temperature in Thermoviscoelasticity: M. Grasselli .....	1447
Local and Non-local Boundary Quenching: C. A. Roberts and W. E. Olmstead .....	1465

*Issue No. 17, 25 November 1999*

The Mean Curvature of the Influence Surface of Wave Equation with Sources on a Moving Surface: F. Farassat and M. Farris .....	1485
A Comparison of the Plate Theories in the Sense of Kirchhoff-Love and Reissner-Mindlin: S. Ebenfeld .....	1505
Regularity of the Global Attractor for the Klein-Gordon-Schrödinger Equation: H. Lange and B. Wang .....	1535
On the Pollution Effect of Quasi-compressibility Methods in Magneto-hydrodynamics and Reactive Flows: A. Prohl .....	1555

*Issue No. 18, December 1999*

Asymptotic Behavior and Stability Assessment of Marine Risers: M. Aassila	1585
Clifford Algebras and 'Maxwell's Equations in Lipschitz Domains: A. McIntosh and M. Mitrea	1599
Scattering for a Wave Equation with Different Spatial Asymptotics on the Left and Right: J. P. Boto	1621
Asymptotic Behaviour of Time-dependent Ginsburg-Landau Equations of Superconductivity: A. Rodriguez-Bernal, B. Wang and R. Willie	1647
Large-time Behavior of Solutions to Non-linear Wave Equations: Higher- order Asymptotics: G. Karch	1671
AUTHOR INDEX	1699
KEY WORD INDEX	1701

